

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

September 20, 2011

In Reply Refer To: WTR-7

Richard Cressey, Vice President
Weatherby, Inc.
1605 Commerce Way
Paso Robles, California 93446

Re: August 10, 2011 Clean Water Act Inspection

Dear Mr. Cressey:

Enclosed is the September 20th report for our August 10, 2011 inspection of Weatherby, Inc. Please submit a short response to the findings in Sections 2 through 5, to EPA, the City of Paso Robles, and the California Regional Water Quality Control Board, by **December 30, 2011**. The main findings are summarized below:

- 1** Weatherby qualifies as new source metal finisher under 40 CFR 433 with one discharge point to the sewers. Weatherby could qualify as a non-significant categorical industrial user after the City of Paso Robles obtains an approved pretreatment program. Weatherby discharges without a permit and there are no sample results in the sample record.
- 2** Weatherby generates and discharges very small volumes of salty and highly alkaline wastewater without treatment. The concentrations of metals, cyanide, and organics would not be expected to exceed Federal standards. However, the high salt and alkaline content would make compliance with the local limits for salinity and pH unlikely. Weatherby could comply with all pretreatment standards by ceasing discharge.
- 3** Salinity issues in San Luis Obispo County stem from the use of water softeners. A new water supply, expected on-line in 2015, should result in relaxed local limits for salinity.

I appreciate your helpfulness extended to me during this inspection. I remain available to the City of Paso Robles, and to you to assist in any way. Please do not hesitate to call me at (415) 972-3504 or e-mail at arthur.greg@epa.gov.

Sincerely,

Original signed by:

Greg V. Arthur
CWA Compliance Office

Enclosure

cc: Patti Gwathmey, Industrial Waste Manager, City of Paso Robles
Sorrel Marks, Central Coast RWQCB



U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 9

CLEAN WATER ACT COMPLIANCE OFFICE

NPDES COMPLIANCE EVALUATION INSPECTION REPORT

Industrial User: Weatherby, Inc.
1605 Commerce Way, Paso Robles, California 93446
New Source Metal Finishing (40 CFR 433)

Treatment Works: City of Paso Robles Wastewater Treatment Plant
NPDES Permit No. CA0047953

Pretreatment Program: City of Paso Robles

Date of Inspection: August 10, 2011

Inspection Participants:

US EPA: Greg V. Arthur, Region 9, CWA Compliance Office, (415) 972-3504

Central Coast RWQCB: None.

City of Paso Robles: Patti Gwathmey, Industrial Waste Manager, (805) 227-1654

Weatherby: Richard Cressey, Vice President Manufacturing, (805) 227-2600
Kevin Nunes, Gunsmith Supervisor, (805) 227-2600

Report Prepared By: Greg V. Arthur, Environmental Engineer
September 20, 2011



1.0 Scope and Purpose

On August 10, 2011, EPA and the City of Paso Robles conducted a compliance evaluation inspection of Weatherby, Inc., in Paso Robles, California. The purpose was to ensure compliance with the Federal regulations covering the discharge of non-domestic wastewaters into the sewers. In particular, it was to ensure:

- Classification in the proper Federal categories;
- Application of the correct standards at the correct sampling points;
- Consistent compliance with the standards; and
- Fulfillment of Federal self-monitoring requirements.

Weatherby is a significant industrial user ("SIU") within sewer service areas administered by the City of Paso Robles whose compliance was assessed as part of the 2011 EPA audit of the Paso Robles pretreatment program. The inspection participants are listed on the title page. Arthur conducted the inspection.

1.1 Process Description

Weatherby manufactures rifles. The operations primarily involve the assembly of parts fabricated off-site, some metal finishing, and testing. The metal finishing steps for chromium/molybdenum-alloyed steel parts involve alkaline cleaning, hot black oxide coating (alkaline magnetite conversion coating), and oil coating. The metal finishing steps for stainless steel parts involve alkaline cleaning, hydrochloric-acid activation, hot black oxide coating, and oil coating. See Appendix 1 on page 14 for a process inventory.

Weatherby began operations at this site in 2006. Weatherby discharges a small volume of non-domestic wastewaters from a few bench-sized metal finishing troughs to the Paso Robles domestic sewers through a single sewer connection. Domestic sewage discharges through separate connections downstream of the industrial wastewater connection. The black oxide gunsmith benches were temporarily located on the main floor.

1.2 Facility SIC Code

Weatherby is assigned the SIC codes for small arms manufacturing (SIC 3484).

1.3 Facility Wastewater Sources

The metal finishing steps generate spents and rinses. There is one main non-domestic sewer connection that receives flow from the black oxide benches as its only sources. On the date of this inspection, Paso Robles had not issued a permit authorizing non-domestic discharges from Weatherby to the sewers. The sewer connection compliance sampling point is designated in this report after the building address as IWD-1605.01.



Black Oxide Finishing – The two black oxide lines for chromium/molybdenum-alloyed steel and stainless steel gun barrels and parts involves alkaline cleaning, hot alkaline black oxide conversion coating, and oil oxidation prevention coating. The line for stainless steel parts also has a hydrochloric-acid activation step.

- Spents - The imparted contamination from the processing of parts and the progressive drop in solution strength usually results in the generation of spents. Spent generation rates depend on bath usage, effectiveness of bath contamination control, and the amount of drag-out lost into the rinses or onto the floor. At Weatherby, all black oxide and black oxide preparation steps are regenerated strictly through additions, and thus do not generate spent solution. Losses from an "adds-only" step therefore must be through the solution drag-out into the rinses since baths without outlets foul through contamination or fail through use.
- Rinses – The black oxide lines together include three continuous, first-stage, low-flow, rinse troughs. These rinses constitute all non-domestic wastewater discharges to the sewer. These rinses discharge treated only for pH.

Assembly and Testing – The other on-site operations do not generate drainages, tail waters, spent coolants or any others wastewaters either for discharge to the sewers or for hauled off-site disposal.

1.4 Facility Process Wastewater Handling

Delivery – The rinses are hard-piped for discharge through IWD-1605.01 to the sewer.

Composition - The process-related wastewaters that discharge through IWD-1605.01 would be expected to be highly alkaline, and contain sulfates, potassium, chlorides, nitrates, nitrites, and rust preventative oil, as well as iron, chromium, molybdenum, nickel, zinc, and other metals removed from the alloyed-metal stock.

Treatment – Rinses from the black oxide lines mix in a small in-line tank for waste-to-waste pH neutralization.

Discharge – Rinses from the black oxide lines discharge through a single sewer connection into the Paso Robles domestic sewers. There is no permit as of yet that identifies the specific location of the final compliance sample point. However, this hypothetical sample point is designated in this report, after the building number as IWD-1605.01. There is no effluent metering of the discharge flow rate, although Weatherby estimates the discharge to be significantly less than 100 gallons per day.

1.5 Sampling Record

Weatherby does not self-monitor because the City of Paso Robles has not issued a permit. Paso Robles also does not collect its own samples.



1.6 POTW Legal Authorities

The City of Paso Robles has enacted an ordinance to implement a pretreatment program in the areas serviced by the City's wastewater treatment plants. Under this authority, the City can issue a permit to Weatherby authorizing discharge of non-domestic wastewater to the sewers.

1.7 Photo Documentation

No photos were taken during this inspection.



2.0 Sewer Discharge Standards and Limits

Federal categorical pretreatment standards (where they exist), national prohibitions, State groundwater, and the local limits (where they exist) must be applied to the sewer discharges from industrial users. (40 CFR 403.5 and 403.6).

Summary

The Federal categorical pretreatment standards for new source metal finishing in 40 CFR 433 apply to the process wastewater discharges from Weatherby. Paso Robles has not yet issued a permit applying the Federal standards for new sources, local limits, the national prohibitions against causing adverse impacts to the sewers, or the Federal prohibition against bypassing treatment necessary to comply. The application of Federal categorical standards, national prohibitions, and local limits was determined through visual inspection. See Appendix 2 on page 15 of this report for likely permit limits.

Requirements

- The City of Paso Robles must issue a permit to apply Federal standards, local limits, national prohibitions to authorize non-domestic discharges to the sewers.
- The permit must include the Federal prohibitions against dilution as a substitute for treatment, and bypassing treatment necessary to comply with standards.
- The permit must identify the discharge point to the sewers from the black oxide lines, designated by EPA as IWD-1605.01 in this report.

Recommendations

- See Section 5.0 and Appendix 2 on pages 13 and 15 of this report for recommended self-monitoring requirements.

2.1 Classification by Federal Point Source Category

Weatherby qualifies as a metal finisher subject to the Federal metal finishing standards for new sources in 40 CFR 433. There is no Paso Robles permit. However, the Federal standards are self-implementing which means they apply to regulated wastestreams whether or not they are implemented in a local permit. The Federal rules in 40 CFR 403.6 define domestic sewage and non-contact waters as dilution waters.

New or Existing Sources – In 40 CFR 403.3(k), a metal finishing process constructed after August 31, 1982 is a new source (1) if it entirely replaces a process which caused a discharge from an existing source or (2) if it is substantially independent of the existing sources on-site. The preamble to the 1988 Federal rule states that the new source **standards apply when "an existing source undertakes major construction that legitimately provides it with the opportunity to install the best and most efficient**



production process and wastewater treatment technologies" (*Fed Register, Vol.53, No.200, October 17, 1988, p.40601*). So after the 1982 deadline, the new source standards apply to the new installation of metal finishing lines, rebuilt or moved lines, lines temporarily removed to install secondary containment, or existing lines converted to do new operations. New source standards generally do not apply to the piecemeal replacement of tanks for maintenance in otherwise intact metal finishing lines.

Non-Significant Categorical Industrial User – In 40 CFR 403.3(v), a significant industrial user subject to categorical pretreatment standards can qualify for lessened oversight if the facility never discharges over 100 gallons per day, and has obtained a determination from the permitting authority that it poses no reasonable potential to adversely affect the sewerage works or to violate any pretreatment standard or requirement. Weatherby may be able to qualify as a non-significant categorical industrial user if Paso Robles obtains an approved pretreatment program, and then decides that it can make the necessary determination.

2.2 Local Limits and National Prohibitions

Local limits and the national prohibitions are meant to express the limitations on non-domestic discharges necessary to protect the sewers, treatment plants and their receiving waters from adverse impacts. In particular, they prohibit discharges that can cause the pass-through of pollutants into the receiving waters or into reuse, the operational interference of the sewage treatment works, the contamination of the sewage sludge, sewer worker health and safety risks, fire or explosive risks, and corrosive damage to the sewers. The national prohibitions apply nationwide to all non-domestic sewer discharges. The Paso Robles local limits apply to non-domestic discharges in the service areas of the City wastewater treatment plant.

2.3 Federal Categorical Pretreatment Standards New Source Metal Finishing - 40 CFR 433.17

40 CFR 433.17	Cd	Cr	Cu	Pb	Ni	Ag	Zn	CNt	CNa	TTO
daily-maximum (mg/l)	0.11	2.77	3.38	0.69	3.98	0.43	2.61	1.20	0.86	2.13
month-average (mg/l)	0.07	1.71	2.07	0.43	2.38	0.24	1.48	0.65	0.32	-

Applicability – Under 40 CFR 433.10(a), the metal finishing standards apply to the **process wastewaters from the new source metal finishing lines because the facility's** operations involve chemical coating, and etching. The metal finishing standards "... apply to plants that perform ..." the core operations of electroplating, electroless plating, etching (acid activation), anodizing, chemical coating (black oxide conversion coating), or printed circuit board manufacturing and they extend to other on-site operations, such as cleaning, machining, shearing, polishing, and assembly, associated with metal finishing and specifically listed in 40 CFR 433.10(a). If any of the core operations are performed, the new source metal finishing standards apply to discharges from any of the



new source core or associated operations. As a result, the metal finishing standards apply to all discharges at IWD-1605.01.

Basis of the Standards – The new source metal finishing standards were based on a model pretreatment unit that comprises metals precipitation, settling, sludge removal, source control of toxic organics, no discharge of cadmium-bearing wastewaters, and if necessary, cyanide destruction and chromium reduction. The best-available-technology standards were set where metal finishers with model treatment operated at a long-term average and variability that achieved a compliance rate of 99% (1 in 100 chance of violation).

Compliance Deadline – New sources are required to comply on the first day of discharge.

Adjustments – Federal standards for metal finishers may need to be adjusted to account for multiple categories, dilution, cyanide, and toxic organics monitoring.

- Multiple Categories – No adjustment is necessary since only one Federal category for new source metal finishing applies to Weatherby.
- Dilution – No adjustment is necessary because there are no discharges through IWD-1605.01 of dilution water as defined in 40 CFR 403.6(d)(e) such as non-contact cooling water, boiler blowdown, water preconditioning reject, or domestic sewage.
- Cyanide Standards – Under 40 CFR 433.12(c), the cyanide standards as applied to new source metal finishing wastewater discharges are to be adjusted to account for dilution from non-cyanide bearing waste streams. However, since there are no cyanide-bearing sources, the cyanide standards apply by default without adjustment to IWD-1605.01.
- Toxic Organics Standards – The Federal standards in 40 CFR 433.12 allow facilities with an approved toxic organics management plan to certify instead of sample for toxic organics. Weatherby would likely qualify for a self-certification in the place of the self-monitoring for toxic organics at IWD-1605.01.

2.4 Federal Prohibitions

The Federal standards in 40 CFR 403.6(d) and 403.17(d) prohibit dilution as a substitute for treatment, and the bypassing of any on-site treatment necessary to comply with standards, respectively. A Paso Robles permit is expected to establish the prohibition against the dilution as a substitute for treatment (template Part II.7), but not the prohibition against bypassing of any treatment necessary to comply.



2.5 Compliance Sampling and Point(s) of Compliance

The permit does not identify the compliance sampling point for the black oxide lines discharge to the sewer, designated in this report as IWD-1605.01.

Sample Points - Federal categorical pretreatment standards apply end-of-process-after-treatment to all Federally-regulated discharges to the sewers. Local limits and the national prohibitions apply end-of-pipe to non-domestic flows.

Sampling Protocols - The national prohibitions are instantaneous-maximums comparable to samples of any length. Federal categorical pretreatment standards are daily-maximums comparable to 24-hour composites. The 24-hour composites can be replaced with single grabs or manually-composited grabs representative of the sampling day's discharge. See Section 5.0 on page 13 and Appendix 2 on page 15.



3.0 Compliance with Federal Categorical Standards

Industrial users must comply with the Federal categorical pretreatment standards that apply to their process wastewater discharges. 40 CFR 403.6(b).

Categorical industrial users must comply with the prohibition against dilution of the Federally-regulated waste streams as a substitute for treatment. 40 CFR 403.6(d).

Industrial users must comply with the provision restricting the bypass of treatment necessary to comply with any pretreatment standard or requirement. 40 CFR 403.17(d).

Weatherby generates and discharges very small volumes of salty and highly alkaline wastewater without treatment to remove the Federally-regulated pollutants expected to be present. There is no sampling to verify the presence or absence of the regulated pollutants, although the alloy metals in the barrel stock would be expected in wastewaters generated by black oxide and acid activation steps. The concentrations of chromium, nickel, and zinc in particular could, but would not, be expected to exceed Federal standards. However, without sample results, there is no way to determine whether the discharges would consistently comply with Federal standards. Weatherby could instead achieve compliance with Federal standards by ceasing all discharges.

Requirements

- None.

Recommendations

- The small volumes of generated wastewaters should be collected to totes for periodic hauling for off-site disposal.

3.1 Sampling Results

There are no self-monitoring or City-collected sampling results for IWD-1605.01.

3.2 Best-Available-Technology Treatment

All process-related wastewaters generated by Weatherby discharge untreated through IWD-1605.01 into the sewers. Treatment in-place, designed and operated to be equivalent to the best-available-**technology** ("BAT") model treatment for metal finishing, would be expected to result in consistent compliance with Federal standards. However, without model treatment, metal finishing wastewaters can achieve consistent compliance through a lack of contamination or a lack of discharge. A small waste stream of under 100 gallons per day can be captured for off-site disposal. The volume can be further reduced through dewatering (evaporation, distillation), or reclaim (ion exchange).



3.3 Dilution as a Substitute for Treatment

The Federal standards in 40 CFR 403.6(d) prohibit "dilution as a substitute for treatment" in order to prevent compromising BAT model treatment with dilute waste streams. In particular, this prohibition applies when sample results for a diluted waste stream are below the Federal standards and the apparent compliance is used to justify discharge without treatment. There are two conditions that need to be established in order to make a determination of non-compliance with this prohibition. First, some or all of the Federally-regulated wastewaters must discharge without undergoing BAT model treatment or its equivalent. Second, there must be some form of excess water usage within a Federally-regulated process.

No determination of "dilution as a substitute for treatment" can be made as of yet without sampling results to establish whether treatment is needed to comply with the Federal standards at IWD-1605.01.

3.4 Bypass Provision

The Federal standards in 40 CFR 403.17 prohibit the bypassing of any on-site treatment necessary to comply with standards unless the bypass was unavoidable to prevent the loss of life, injury, or property damage, and there were no feasible alternatives. This provision explicitly prohibits bypasses that are the result of a short-sighted lack of back-up equipment for normal downtimes or preventive maintenance. It also explicitly prohibits bypasses that could be prevented through wastewater retention or the procurement of auxiliary equipment. It specifically allows bypasses that do not result in violations of the standards as long as there is prior notice and approval from the sewerage agency or State.

Bypassing is not possible at Weatherby because all non-domestic wastewaters discharge untreated to the sewer.



4.0 Compliance with Local Limits and National Prohibitions

All non-domestic wastewater discharges to the sewers must comply with local limits and the national prohibitions. 40 CFR 403.5(a,b,d).

Industrial users must comply with the provision restricting the bypass of treatment necessary to comply with any pretreatment standard or requirement. 40 CFR 403.17(d).

Without sample results, no determination can be made for whether Weatherby can comply with its local limits for metals, cyanide, and organics. However, the highly alkaline and salt content of the expected discharges make compliance with the local limits for salinity and pH unlikely. Salinity issues in San Luis Obispo County stem from the widespread use of water softeners. As a result, Paso Robles and other communities in the county, under a RWQCB Time Schedule Order, are constructing a surface water treatment plant and delivery pipeline for low-hardness water from Lake Nacimiento. The new water supply, expected on-line in 2015, should result in relaxed local limits for salinity.

Requirements

- None.

Recommendations

- The small volumes of generated wastewaters should be collected to totes for periodic hauling for off-site disposal.

4.1 National Objectives

The general pretreatment regulations were promulgated in order to fulfill the national objectives to prevent the introduction of pollutants that:

- (1) cause operational interference with sewage treatment or sludge disposal,
- (2) pass-through sewage treatment into the receiving waters or sludge,
- (3) are in any way incompatible with the sewerage works, or
- (4) do not improve the opportunities to recycle municipal wastewaters and sludge.

This inspection did not include an evaluation of whether achievement of the national objectives in 40 CFR 403.2 have been demonstrated by the Paso Robles wastewater treatment plant through consistent compliance with their sludge and discharge limits.

4.2 Local Limits and National Prohibitions

Since there are no sample results, no determination is possible of whether Weatherby consistently complies with the local limits and the national prohibitions. However, given



the low discharge flow rates, it is very unlikely, and there is no evidence, that process-related discharges from Weatherby resulted in the operational interference of the Paso Robles collection systems and wastewater treatment plant; there is also no evidence that these discharges resulted in a pass-through of pollutants from the Paso Robles wastewater treatment plant to the receiving waters.

Metals and Cyanide – Alkaline oxidation black oxide lines would not be expected to generate significant levels of metals or cyanide.

High-Strength Organics – Given the small flow rates and inorganic chemical composition of the metal finishing solutions, the non-domestic discharges would not be expected to pose any risk of interference from organics overloading or the formation of septic conditions.

Toxic Organics and Oils – The final oil coating steps could be an inadvertent source of oils and potentially of the constituent toxic organics, if any.

Salinity and Minerals – Alkaline oxidation black oxide lines would be expected to generate significant levels of salinity, resulting in levels that would likely exceed the local limits for total dissolved solids, sulfates, and sodium. However, given the small flows, the loadings into the Paso Robles sewer system would be nearly negligible. The installation of treatment in particular to adjust pH would add to the salt loads. Salinity should no longer be a water quality issue upon start-up of the low-hardness municipal water supply.

Corrosion - Sewer collection system interferences related to the formation of hydrogen sulfide and the resulting acidic disintegration of the sewers are not expected. The wastewaters discharged to the sewers are not high-strength in biodegradable organics and the discharge flow rates are insignificant.

Flammability - Flammability would not be expected because sampling shows that the discharges to the sewer entrain negligible amounts of volatile organics.



5.0 Compliance with Federal Monitoring Requirements

Significant industrial users must self-monitor for all regulated parameters at least twice per year unless the sewerage agency monitors in place of self-monitoring. 40 CFR 403.12(e) & 403.12(g).

Each sample must be representative of the sampling day's operations. Sampling must be representative of the conditions occurring during the reporting period. 40 CFR 403.12(g) and 403.12(h).

Permit Requirements – Weatherby discharges without a permit issued by Paso Robles. If Weatherby opts to comply with the Federal standards and local limits by collecting the small volumes for off-site disposal, then no permit would be needed, although some sewer districts issue zero-discharge permits in order to receive self-certifications of no discharge. If Weatherby opts to discharge, then the permit would advance Federal standards, local limits, national prohibitions, and self-monitoring and reporting requirements. Once there are four samples to establish a discharge quality baseline, the Federal minimum is twice per year self-monitoring.

Representativeness – There is no sample record to determine representativeness over both the sampling day and the six-month reporting period.

Requirements

- See Appendix 2 on page 15 of this report for the self-monitoring and city monitoring requirements for that would be considered to be representative of the discharges.

Recommendations

- While all of the Federally-regulated pollutants must be self-monitored, some locally-regulated pollutants do not have to be, if they are absent in the discharge.
- A toxic organics management plan should include certifications of no release in lieu of self-monitoring for any of the toxic organics not present on-site.



Appendix 1

Weatherby - Tank Inventory, Tank Number, Volume, and Delivery Method

Delivery ✓	Tank Designations and Contents			gals	Delivery ✓	Tank Designations and Contents			gals
Black Oxide Line for Cr/Mo-Alloyed Steel					Black Oxide Line for Stainless Steel				
adds only	A1	alkaline cleaner	10	adds only	B1	alkaline cleaning	10		
sewer 01	A2	1° low-overflow rinse for A1/A3	10	sewer 01	B2	1° low-overflow rinse for B1/B3	10		
adds only	A3	black oxide coating	10	adds only	B3	HCl-acid pickling	10		
adds only	A4	oil coating	10	adds only	B4	black oxide coating	10		
				sewer 01	B5	1° low-overflow rinse for B4	10		
				adds only	B6	oil coating	10		

✓ sewer 01 – in-plant sewer drain line to the City sewer (IWD-1605.01)

✓ adds only – additions only so no discharge to the City sewer



Appendix 2

Sewer Discharge Standards and Limits for Weatherby @ IWD-1605.01

Pollutants of Concern	Fed stds (d-max)	Fed stds (mo-avg)	nat'l pro (instant)	local lim (inst/dmax)	monitoring frequency ①	
					Weatherby	Paso Robles
cadmium (mg/l)	0.11	0.07	-	0.10	2/year	1/year ⑤
chromium (mg/l)	2.77	1.71	-	3.70	2/year	1/year ⑤
cobalt (mg/l)	-	-	-	0.075	③	-
copper (mg/l)	3.38	2.07	-	0.30	2/year	1/year ⑤
lead (mg/l)	0.69	0.43	-	-	2/year	1/year ⑤
molybdenum (mg/l)	-	-	-	1.10	2/year	1/year ⑤
nickel (mg/l)	3.98	2.38	-	1.90	2/year	1/year ⑤
selenium (mg/l)	-	-	-	0.27	③	-
silver (mg/l)	0.43	0.24	-	-	2/year	1/year ⑤
zinc (mg/l)	2.61	1.48	-	4.00	2/year	1/year ⑤
total cyanide (mg/l)	1.20	0.65	-	0.01	2/year	1/year ⑤
total toxic organics (mg/l)	-	2.13	-	-	2/year ②	1/year ② ⑤
ammonia (mg/l)	-	-	-	20.0	③	-
boron (mg/l)	-	-	-	5.0	③	-
oil and grease (mg/l)	-	-	-	100	2/year	1/year ⑤
sulfate (mg/l)	-	-	-	200	1/month	1/year ⑤
total suspended solids (mg/l)	-	-	-	360	③	-
total dissolved solids (mg/l)	-	-	-	1000	1/month	1/year ⑤
sodium (mg/l)	-	-	-	200	1/month	1/year ⑤
chloride (mg/l)	-	-	-	150	1/month	1/year ⑤
biochem oxy demand (mg/l)	-	-	-	360	③	-
temperature (°F)	-	-	-	150°F	③	-
pH (s.u.)	-	-	<5.0	6.0-9.0	1/month	1/year ⑤
explosivity	-	-	<140°F ④	<140°F ④	③	-

① Recommended **reductions in green**. Recommended **increases in red**.

② Self-certification to following an approved toxic organics management plan is allowed in lieu of sampling. A City inspection could then qualify as an independent determination.

③ As part of periodic priority pollutant scans in order to identify changes in discharge quality.

④ Closed-cup flashpoint.

⑤ Twice -per year city monitoring could replace two self-monitoring samples per year.